1. Introduction

Thank you for attending this public exhibition of proposals by E W Pepper Ltd and Savills Energy for the development of a Solar Photovoltaic Farm on approximately 45ha of farmland at Bury Lane Farm, Melbourn. E W Pepper are the landowners of the application site, which can be seen on the plan below, edged red. Savills Energy will be responsible for securing a specialist solar developer to build the scheme should planning permission be granted.

The purpose of this public exhibition is to provide the local community with the opportunity to meet with the project team to understand more about the proposal and to provide their comments. A planning application for the proposed development will then be submitted to South Cambridgeshire District Council as the Local Planning Authority once all the comments have been considered.

The following boards provide more information about why the development is proposed, what the proposal involves and how it has been arrived at. More information is also provided about the work that has been undertaken in designing the proposed scheme.

Should you have any questions, please ask representatives of Savills Energy who are in attendance here at the exhibition today.
2. Climate Change, Renewable Energy and Solar Photovoltaics

There is a global imperative to address global climate change by reducing the emission of greenhouse gases, particularly carbon dioxide (CO2), that contribute to global warming. The importance of addressing climate change is established through various pieces of legislation and policy, both at United Kingdom Government level and at a European level. Indeed, under the Climate Change Act of 2008 there is a legal obligation in the United Kingdom to reduce greenhouse gas emissions to at least 80% below 1990 levels by 2050.

In planning policy terms, the legislative agenda to deal with climate change translates into support for the principle of renewable energy development. This support is within the National Planning Policy Framework at the national Government level and within South Cambridgeshire District Council’s planning policies at the local level. Proposals must however be acceptable in site specific terms.

Solar Photovoltaics is a specific type of renewable energy technology that captures solar radiation or sunlight for conversion into electricity. Solar radiation is captured by photovoltaic modules, also known as solar panels. These panels convert this radiation into a direct electricity current. This direct current (DC) is then converted by an ‘inverter’ into a usable alternating current (AC). This current can then be used for domestic purposes in such cases where panels are mounted on the roofs of domestic properties, for example. In the case of this development, the proposal is to capture solar radiation on a large scale and then to return this to the National Grid for consumption by multiple customers. The photograph below shows a typical solar farm development.

Therefore, the reason for this proposal is to provide for renewable energy in helping to achieve targets for reduction of greenhouse gases, as required by policy and legislation. The following provides more information about the specifics of the proposed development and why we have selected the application site for the development.

Aerial view of completed solar farm scheme
3. The proposed scheme

The proposals involve the construction of solar photovoltaic panels and associated works including inverter housings, access tracks, security fencing and cameras.

The proposed operational life of the solar energy farm is at least 25 years, after which time it could be removed, or the lifetime extended subject to further planning controls. The installed equipment could continue to produce electricity efficiently for around 40 years.

Site Context

The site lies to the north west of the Cambridge to London train line. The southern point extends to the Icknield Way Path. The site does not border any public roads but there is access to the south east.

The site is made up of three arable fields which very gently slope northwards towards a stream and a hedge subdivides the site internally.

There are five small areas of woodland located around the site: two to the north, two to the west and one to the south east. In addition most of the western, southern and eastern perimeter boundaries are marked by hedges.

The existing hedgerows and woodland provide localised screening to much of the development from public locations and residential properties. The railway embankment and vegetation around of Melbourn contains views from the east. Views from Meldreth are largely contained by perimeter vegetation.

The existing hedgerows and woodland also reduce views into the site. These are traditional agricultural hedgerows, having the added benefit of limiting change required to enable the development to be deemed acceptable.

To the east of the site beyond the railway there is a local nature reserve approximately 500m away.

Design Principles

The proposed development would cover an area of approximately 45ha, contained within existing field boundaries. The freestanding solar panels are constructed from toughened glass set in an aluminium frame.

The panels would be arranged in rows on an east to west alignment facing south to maximise sunlight exposure. The panels themselves would be mounted on "tables" with a tilt angle of around 25 degrees.

The rows of panels would be set back from the site boundaries to prevent overshadowing from adjoining vegetation or a site fence. There would also be a separation of 4-6m between each row, again to ensure that the panels are not overshadowing each other. This will ensure that the existing trees and hedges that surround the site will not be harmed by the development.

The proposed solar panels are mounted close to the ground, being around 2.2 metres high and are fixed into position through piles driven into the ground. No concrete foundations are required and little excavation is therefore necessary.

To ensure the security of the solar array equipment security fencing would be erected around the site boundary to restrict access to the site.

The shape of the fields within the selected site dictate the layout of the solar panels but also the direction in which the panels are facing so as to absorb the most sunlight.

In order to convert the direct current (DC) electricity generated by the solar panels to alternating current (AC) electricity suitable for distribution into the local electrical grid network, small inverter cabins are positioned at strategic locations throughout the site. These feed a series of transformers which increase the voltage of the electricity for transmission into the Distribution Network.

The surface of each solar panel is constructed from toughened glass, beneath which is a non-reflective layer, electrical connections, silicon and a backing layer, all of which is set in an aluminium frame.

Grass or grazing would be allowed to grow on the site along with other species of naturally occurring local wild flower species. Bi-annual mowing of the site would be required to ensure that the solar panels are not harmed or overshadowed by long grass.

The fixings to the ground consist of screw of pile driven steel piles which can be removed at the end of the solar park's lifetime. A small amount of concrete will be required to support the inverter buildings and transformer substation.
4. Environmental considerations

Landscape and Visual Impact Considerations
A key factor in the selection of the application site and the configuration of the development has been the objective of minimising the impact on the landscape character and visual amenity. The likely visible extent of the proposals has been evaluated from surrounding areas. There is generally a good level of screening from the local villages and other public locations including roads. Locations identified with a more open public view are to the north east and south. From the north east including Station Road overbridge and a nearby public footpath the northern edge of the development would be visible. A belt of tree and shrub planting is therefore proposed to enclose the development and screen views from this direction. From the south and south west there are intermittent views from the Icknield Way/Higham Road Way although much of the route is enclosed by tall hedging. However, there are some open sections and a native hedge is therefore proposed to the southern boundary to contain views across the site. There will also be views from the railway and the existing hedging will be strengthened to filter these views. The Landscape Planting Proposals Plan is shown opposite.

Ecological and Biodiversity Considerations
Having identified the application site, further work was undertaken to understand any ecological constraints affecting the site. This work found that the site presents potential habitat for breeding birds. Discussions are taking place with the Council about mitigation for breeding birds.
5. Construction and traffic

The main construction period is expected to last 18 weeks. This will include the construction of concrete bases for inverters and transformers, installation of frames on which the solar panels will be mounted, laying of underground cables, erection of security fencing and CCTV cameras.

A temporary construction compound will be located on adjacent land and will be used to store equipment and materials during construction. The solar park elements will then be managed within the site. Banksmen will manage vehicle movements within the site in order to ensure the construction operation is carried out in a safe and efficient manner.

Access for all vehicles delivering components and materials would be from the A10 via the existing farm shop entrance. HGV access will be via the strategic routes of the A10, A505, M11 and A14. A specific Traffic Management Plan will be produced by the Principal Contractor which will cover the operation of the site access and requirement of temporary highway signage. The signage will be agreed by the Principal Contractor with Cambridgeshire County Council’s Highways Department.

It is anticipated that a maximum of 10 HGVs per day will deliver equipment and materials during the busiest stage of construction. Following construction there will be relatively little traffic to the site for maintenance.
6. Conclusion

In conclusion, the site has been carefully selected due to its high irradiation score, location to substation and good screening by trees and woodland so as not to impact on the landscape and character of the area, or residential amenity.

It is considered that the proposal will provide a source of renewable energy, which accords with local national planning policy and also relevant legislation. The specifics of the proposals have been designed through understanding of the context of the application site and the surrounding area, in seeking to ensure that it is sound from an environmental perspective and in site specific terms.

The solar energy proposal responds to international, European and national policy, and the long term aim of reducing CO2 emissions, by helping to contribute to the attainment of renewable energy targets. The proposals will therefore take a step closer to meeting the UK’s climate change obligations.

We would however welcome the comments of the local community and details of how to comment are provided below.

Your comment

We would welcome your comments upon the proposal. Please leave your comments in the comments box provided.

We will respond to these comments within a Statement of Community Involvement that will be submitted to South Cambridgeshire District Council.

We will email any comments left in the comments box to the Parish Council.
Viewpoint 1 (Existing) - View from the Harcamlow Way/ Icknield Way Path adjacent site boundary looking north

Viewpoint 1 (Year 1) - View from the Harcamlow Way/ Icknield Way Path adjacent site boundary looking north

Viewpoint 1 (Year 15) - View from the Harcamlow Way/ Icknield Way Path adjacent site boundary looking north
Viewpoint 2 (Existing) - View from an open stretch of the Harcamlow Way/ Icknield Way Path looking north east towards the site

Viewpoint 2 (Year 1) - View from an open stretch of the Harcamlow Way/ Icknield Way Path looking north east towards the site

Viewpoint 1 (Year 15) - View from the Harcamlow Way/ Icknield Way Path adjacent site boundary looking north east towards the site

Viewpoint Location Plan (1:25,000)
Viewpoint 3 (Existing) - View from the railway bridge on Station Road, looking south west towards the site

Viewpoint 3 (Year 1) - View from the railway bridge on Station Road, looking south west towards the site

Viewpoint 3 (Year 15) - View from the railway bridge on Station Road, looking south west towards the site

If you have any questions about this scheme please contact Andrew Hodgson at ajhodgson@savills.com